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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/708,573	03/11/2004	Hung-En Tai	LKSP0047USA	2572
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27765	7590	06/13/2005
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NORTH AMERICA INTERNATIONAL PATENT OFFICE (NAIPC)  
P.O. BOX 506  
MERRIFIELD, VA 22116

EXAMINER

TSAL, CAROL S W

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8m

<b>Office Action Summary</b>	Application No. 10/708,573	Applicant(s) TAI ET AL.	
	Examiner Carol S. Tsai	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, 6-10, 13, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,797,526 to Tanaka et al.

With respect to claims 1, 3, 8, and 10, Tanaka et al. disclose a method for early warning management of at least one piece of semiconductor equipment, each piece of equipment processing a plurality of semiconductor products according to at least one corresponding process parameter, the method comprising: recording each process parameter for each piece of equipment and recording processing conditions of each piece of equipment as at least one corresponding equipment parameter when each piece of equipment is processing (see col. 6, line

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57 to col. 7, line 25); evaluating and recording the quality of semiconductor products and corresponding testing parameters after each semiconductor product has been processed (see col. 8, lines 9-32); and analyzing a relationship between the corresponding process parameter, the corresponding equipment parameters, and the semiconductor product quality for each piece of equipment (see col. 7, lines 4-64).

As to claims 2 and 9, Tanaka et al. also disclose analyzing equipment difference of two pieces of equipment (manufacturing equipments 1-1 and 1-2 shown on Fig. 2) in the same process (sub-process (1) shown on Fig. 2) according to the semiconductor product quality of at least two pieces of equipment (see col. 5, line 61 to col. 6, line 33).

As to claims 6 and 13, Tanaka et al. also disclose recording the corresponding process parameter, the corresponding equipment parameters, and the analytic results in a database (see col. 7, lines 17-25).

As to claims 7 and 14, Tanaka et al. also disclose feedback monitoring to transmit the analytic results to a user through a network or a man-machine interface (see col. 6, lines 57-65).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 5, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. in view of U. S. Patent No. 6,766,283 to Goldman et al.

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As noted above, with respect to claims 4, 5, 11, and 12, Tanaka et al. disclose the claimed invention, except for using a two sample t-test.

Goldman et al. teach using a two sample t-test (see col. 11, lines 15-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Tanaka et al.'s method to include using a two sample t-test., as taught by Goldman et al., in order that variances between the two groups of samples can be compared.

### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mozumder et al. disclose a method and system for controlling a plurality of process control variables for processing discrete products.

Hattori et al. disclose a quality management system comprising a data processing unit, a processed-data judgment unit receiving an output from the data processing unit, a sampling unit receiving an output from the processed-data judgment unit, a file making unit receiving an output from the sampling unit, a data processing unit receiving an output from an observation unit and a processed-data judgment unit receiving an output from the data processing unit.

Maekawa discloses a failure diagnostic method and apparatus for diagnosing a failure of equipment based on an operating state of the equipment.

Strauch et al. disclose a production control system providing real-time monitoring of

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process parameters in an automated production line that manufactures contact lenses, the line and having a plurality of process stations with each process station having one or more process control devices that control production operations at each respective process station and generates production parameter data therefrom.

Tai et al. disclose a method including searching for the defect inspection parameters of a plurality of lots of products from a database, classifying the plurality of lots of products into at least a qualified group and a failed group according to the defect inspection parameters, searching for a process step correlated to a defect inspection item from the database, searching for manufacturing equipment through which the qualified group has passed in the process step and the manufacturing equipment through which the failed group has passed in the process step, and determining the manufacturing equipment through which the probability that the failed group having passed which is greater than that of the qualified group.

### *Contact Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).



Carol S. W. Tsai  
Primary Examiner  
Art Unit 2857

cswt  
June 8, 2005